NWS: EHB-6, Modification Note 67
DoD: TO 31P1-4-108-600

CRITICAL POWER CIRCUIT BREAKER RELOCATION

DOPPLER METEOROLOGICAL RADAR
WSR-88D

PUBLISHED UNDER AUTHORITY OF THE SECRETARIES OF
COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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NWS APPROVAL:

_____ **Date** 7/26/02
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DoD APPROVAL:

BY ORDER OF THE SECRETARY OF THE AIR FORCE

JOHN P. JUMPER, General, USAF
Chief of Staff

Peter J. Grant For **Date** 7/30/02
Edward L. Berkowitz, Chief
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TOMA

1. SUBJECT

Critical Power Circuit Breaker Relocation.

2. PURPOSE

During power transfers, there is the possibility the telecommunications link will not recover. This could lead to a loss of communications with the RDA. To provide constant power to this link, it needs to be powered by the Transition Power Maintenance System (TPMS). This will require relocating a circuit and associated breakers in the Main Power Distribution Panel (UD7A2) to the Secondary Power Distribution Panel (UD7A3). In addition, site technicians should verify the fire suppression control panel circuit breaker has been relocated to the Secondary Power Distribution Panel. Another part of this modification is to add an electrical outlet, circuit breaker, and conduit to support power requirements for the Remote Base Data Distribution Systems (RBDDS) at DoD locations. The authorities for this modification are Radar Operations Center (ROC) Engineering Change Proposal (ECP) F0059R3, Continuous Power Source for WSR-88D Radars (TPMS) and ECP F0169, Install Remote Base Data Distribution Systems (RBDDS) on the Kunsan AB and Camp Humphreys, South Korea WSR-88Ds.

For additional information concerning this document, contact the ROC Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at NEXRAD.Hotline@noaa.gov. An electronic copy of this document can be found at the following internet address: www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp

3. SITES AFFECTED

See ATTACHMENT 2.

4. ESTIMATED COMPLETION DATE

This modification must be completed and reported no later than 60 days after receipt of this document.

5. EQUIPMENT AFFECTED

Radar Data Acquisition Group.

6. SPARES AFFECTED

Not applicable.

7. MODIFICATION ACCOMPLISHED BY

The site electronics technicians are responsible for shutting down and turning on the equipment. The site facilities technicians, Civil Engineering technicians, or licensed electricians are required to perform the modifications within the power distribution panels.

It is advisable to have a pre-installation survey accomplished by the site technicians and the electricians performing the electrical work. This will ensure all proper tools and equipment required to peform the modification can be present.

NWS: Site facilities technicians, with the assistance of site electronics technicians, will accomplish this task. Two technicians are required to perform these procedures. The site electronics technician is responsible for reporting the completion of this modification.

DoD: Civil Engineering technicians, with the assistance of the site electronics techicians, will accomplish this task. Two technicians are required to perform these procedures. The site electronics technician is responsible for reporting the completion of this modification.

8. MATERIAL REQUIRED

The items listed below are an estimated amount and quantity of the materials required to accomplish this modification. It is advisable to have a pre-installation survey prior to accomplishing this modification.

Use the table provided in ATTACHMENT 2 to determine your site configuration.

Nomenclature	Part Number	NSN	Qty	Configuration
Conduit, 1/2 inch	N/A	N/A	30 ft	3
Conduit, 3/4 inch	N/A	N/A	10 ft	1, 2, 3
Copper conductor 12 AWG, green	N/A	N/A	100 ft	1, 2, 3
Copper conductor 12 AWG, black	N/A	N/A	100 ft	1, 2, 3
Copper conductor 12 AWG, white	N/A	N/A	100 ft	1, 2, 3
120VAC Duplex receptacle, 20 Amp, 3-prong	N/A	N/A	1	3
Outlet cover	N/A	N/A	1	3
Utility box, 2X4	N/A	N/A	1	3
20 Amp, Cutler Hammer circuit breaker	Q0120VH	5925-01-417-8711	1	3

Nomenclature	Part Number	NSN	Qty	Configuration
Fittings and anchors to connect conduit	N/A	N/A	As needed	1, 2, 3
Wire nuts	N/A	N/A	As needed	1, 2, 3
Pan screws, #10, 1 inch	N/A	N/A	As needed to attach utility box	3
Tie wraps	N/A	N/A	As needed for a clean install	1, 2, 3
* Critical power label	N/A	NWS0-21-980-0001	10	1, 2, 3

* Will be requisitioned by the ROC and shipped at no cost to the site.

9. SOURCE OF MATERIALS

NWS: The site facilities technician or the licensed electrician will supply any necessary parts listed in paragraph 8.

DoD: Civil Engineering (CE) will supply the required parts listed in paragraph 8.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Not applicable.

11. TIME AND PERSONNEL REQUIRED

Work Phases	Work-hours
Unpacking	.0
Disassembly	.0
Installation	3.0
Assembly	.0
Operational Check	.5
Total Work-hours	3.5

12. DOCUMENTS AFFECTED

Not applicable.

13. VERIFICATION STATEMENT

This modification was successfully performed at Vance AFB, OK and Altus AFB, OK.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

Not applicable.

15. PROCEDURES

See ATTACHMENT 1.

16. FAA DISTRIBUTION

Not applicable.

17. CHANGES TO TABLE OF CONTENTS (FAA)

Not applicable.

18. RECOMMENDATIONS FOR CHANGES (FAA)

Not applicable.

19. REPORTING INSTRUCTIONS

a. NWS

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to the instructions in Engineering Handbook No. 4 (EHB-4), Engineering Management Reporting System (EMRS), part 2. Include the following information on the WS Form A-26:

- An Equipment Code of RDA in Block 7.
- The appropriate serial number in Block 8.
- A Mod No. of 67 in Block 17a.

See ATTACHMENT 4 for a completed sample of WS Form A-26.

b. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

Complete ATTACHMENT 3 and return the information to the ROC by one of the four methods below:

(1) Mail Address: Program Branch, Retrofit Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, Oklahoma 73072-8028

(2) Fax Number: (405) 366-6553
ATTN: Retrofit Management Team

(3) E-mail Address: NEXRAD.Logistics@noaa.gov

(4) Web Version: http://www.roc.noaa.gov/ssb/logistics/complete/

ATTACHMENT 1

CIRCUIT BREAKER RELOCATION PROCEDURES

Tools Required

Screwdriver set, flat-tip
Flashlight
Multimeter
Droplight with 50 foot cord

NOTE

If you have the RDA/RPG Remote Access Terminal (RRRAT) installed, refer to the corresponding keystrokes applying to your system (i.e., <Enter> versus <Return> and <Alt><Tab> versus <Shift> and <Port> keys). RRRAT keystroke differences are located in the conversion chart provided with the RRRAT installation kit. All keystrokes having a double underline will require you to refer to the conversion chart for the applicable key strokes (i.e., <Return> will convert to <Enter>).

1. Perform the following procedures to transfer control to the RDA:

   a. If Open RPG has not been installed, perform the following steps at the UCP; otherwise, proceed to step 1b:

      (1) At the UCP Applications Terminal, verify the RPG Main menu is displayed. If not press the **<F1>** key.

      (2) At the RPG Main menu, select the RDA Control menu by entering **RD<Return>** at the command line. In the RDA Control field in the status area of the menu appears as:

      RDA
      CNTL
      RPG

NOTE

In the next step, after RD,EN is entered at the UCP, the controlling channel will continue to indicate MODE REM OPER at the RDA Maintenance terminal until RELC (Request Local Control) is performed at that terminal (either remotely or at the RDA site assuming the RDA is in operate). If the controlling channel is in STBY, the MODE will go to L/R when the EN is performed at the UCP.

      (3) Enable local control of the RDA by entering **EN<Return>** at the command line. The message `COMMAND EXECUTED-RD,EN` will be displayed. Proceed to step 2.

b. If Open RPG has been installed, perform the following steps at the Master System Control Function (MSCF):

(1) At the MSCF workstation, on the HCI (Human Computer Interface), click on the Control Block in the RDA container, and observe `RPG` is indicated in the `RDA Control:` line.

(2) Click **Enable Local (RDA)** button in the RDA Control area and click **Yes** on the confirmation pop-up window. `Enable RDA Control of RDA` is noted on the Feedback: line.

NOTE

In step 1b(2) after control is enabled from the MSCF workstation, the RDA will continue to indicate `MODE REM OPER` at the RDA Maintenance Terminal until RELC (Request Local Control) is performed at that terminal (either remotely or at the RDA site) assuming the RDA is in Operate. For redundant systems, only the controlling channel could be in Operate. If the controlling channel is in STBY, the MODE will already indicate L/R.

2. At the RDA Maintenance Terminal, perform RDA Group Shutdown procedures for the controlling channel:

a. At the command line, enter **RELC<Return>** to request local control from the UCP or MSCF. `RELC-ACCEPTED` appears on the feedback line and `LOC` appears in the MODE field. The RDA is now in local control.

NOTE

Wait until the ARCH status indicates LOADED before proceeding. This will normally take 1 to 2 VCPs.

b. Set the archive device to idle by entering **ARCH<Tab>D<Return>** at the command line.

c. Check the STAT line. If the STAT is not `STBY`, enter **STBY<Return>** to place the channel in standby.

d. At the command line, enter **TERP<Tab>***password***<Return>** and wait for the message `TERP ACCEPTED` to be displayed.

e. Press the **<Shift>** and **<Port>** keys simultaneously to move the cursor to the System Console. `Task 02:End of Task` appears after a short delay at the System Console.

f. At the * prompt, enter **ERR LOG,OFF<Return>** to turn the error logger off.

g. At the * prompt, enter **D TA<Return>** to display all running tasks. If any tasks (except for TIME) are running, enter **CA** *taskname***<Return>** to cancel each task.

h. At the * prompt, enter **MA DSCØ:,OFF<Return>** to mark Disk 0 off.

i. Verify Disk 0 is off by entering **D D<Return>**.

j. Simultaneously press the **<Ctrl>** and **V** key twice, then press the **<Return>** key until the CDS> prompt appears.

k. Enter **KEY 1,***password***<Return>**.

l. Halt the CPU by entering **HA<Return>**.

m. Enter **PO OFF<Return>** to turn off the DC Power Supply to the processor boards.

3. Perform the following steps at the Transmitter (UD3):

   a. At the Transmitter Power Distribution Panel (UD3A13) place circuit breakers (CB3) cabinet lights, (CB1) high voltage power, and (CB2) auxiliary power to the **OFF** position.

   b. Lock the CB1 high voltage power circuit braker by rotating the key clockwise to **LOCK** and remove the key.

   c. For redundant sites, repeat steps 2 and 3 in their entirety on the non-controlling channel.

4. Place the Pedestal Electronics Power switch (UD5A2S3) to the **OFF** position.

5. Place the DAU Power switch (UD5A2S4) to the **OFF** position.

6. At the Waveguide Pressurization Unit (UD6), set the front panel switch to the **OFF** position. (Redundant sites, ensure the Waveguide Pressurization Unit for both channels are set to the **OFF** position.)

7. At the Fire Suppression Control Panel (UD7A5), disconnect the (-) battery lead from one of the batteries. The audible alarm while beep until site power is removed.

8. **Co-located sites only:** Perform the following RPG shutdown steps, all other sites proceed to step 9:

   a. If at the RPGPCA Cabinet (UD70) (Open RPG sites ONLY) workstation, perform the following steps; otherwise proceed to step 8b:

      (1) If at the CDE login screen, skip to step 8a(4).

(2) If within CDE, exit CDE by clicking on the **EXIT** button on the CDE Front Panel and then click on the **OK** button in the confirmation window.

(3) Wait for the CDE login screen to appear.

(4) At the RPG Processor (UD70A7), push the power button on the front of the processor.

(5) Wait for approximately 1 minute until the OK prompt appears indicating the operating system has been terminated.

(6) At the RPGPCA Cabinet UPS Assembly (UD70A11), press the "0" (OFF) power switch button. This will remove power from most of the equipment in the RPG cabinets.

(7) At the RPGPCA Cabinet Power Distribution Panel (UD70A22), located at the rear of the processor cabinet, set the circuit breaker (CB1) to the **OFF** position.

(8) Proceed to step 9.

b. Perform the following steps to shut down UD21/22 RPG (Legacy RPG ONLY) and communication cabinets:

NOTE

Coordinate with the applicable NWS office, which maintains the UCP for your RPG to perform the following shutdown procedures of the RPG UD21/22.

(1) At the UCP, press the **<F1>** key to display the RPG Main menu.

(2) Enter **U<Return>** to display the Unit Control menu.

(3) Enter **SH,O<Return>** and wait for `RPG SHUTDOWN` to be displayed.

(4) Press the **<Shift>** and **<Port>** keys simultaneously to access the System Console.

(5) Enter **D TA<Return>** and verify `TASK(S) NOT FOUND` is displayed. If tasks are displayed, enter **CA** *taskname***<Return>** to cancel each active task.

(6) Enter **ERR LOG,OFF<Return>** to turn the error logger off.

(7) At the * prompt, enter **MA DSCØ:,OFF<Return>** to mark Disk 0 off.

(8) Verify Disk 0 is off by entering **D D<Return>**.

(9) Simultaneously press the **<Ctrl>** and **V** key twice, then press the **<Return>** key until the CDS> prompt appears.

(10) Enter **KEY 1,***password***<Return>**.

(11) Halt the CPU by entering **HA<Return>**.

(12) Enter **PO OFF<Return>** to turn off the DC Power Supply to the processor boards.

CAUTION

The following shutdown procedures are required due to extreme heat in the TPS shelter. When the Main Power Breaker in the Main Power Distribution Panel is shut off the TPS Environmental Control Unit (ECU) will be powered off. Shutting down the TPS will ensure the batteries will not be adversely affected by the heat.

9. If a TPS is installed, perform the following shutdown procedures, if not skip to step 10:

   a. Perform the step that applies to your site:

      (1) At the RDA Critical Equipment Contactor (CEC) Coil Control Panel (UD7TPS1), set the circuit breaker to **OFF**, or

      (2) At the RDA CEC-Distribution Panel (UD7TPS2), set ALL circuit breakers to **OFF**.

   b. On the TPS Control Panel, turn the **MODE** switch to the **BYPASS** position. Wait for BYPASS mode to be displayed on the monitor panel.

   c. On the TPS Control Panel, turn the **BATTERY** switch to the **OFF** position.

   d. On the TPS Control Panel, turn CB1 to the **OFF** position.

   e. In the Battery Cabinet, **OPEN** the Battery Disconnect Breaker.

   f. Perform the step that applies to your site:

      (1) If applicable, set the Output Fused Disconnect Switch to the **OFF** (Open) position, or

      (2) In the Maintenance Bypass Module, set the UPS Output Breaker (UOB) to the **OFF** (Open) position.

g. Perform the step that applies to your site:

(1) If applicable, set the Input Fused Disconnect Swith to the **OFF** (Open) position, or

(2) In the Maintenance Bypass Module, set the UPS Input Breaker (UIB) to the **OFF** (Open) position.

NOTE

When step 10 is completed the lights in the shelter will be off. Use a flashlight, or droplight to provide adequate lighting.

10. On the RDA Main Power Distribution Panel (UD7A2), set all circuit breakers, including the main circuit breaker, to **OFF**.

11. Perform the applicable step for single channel sites, or redundant channel sites:

Single channel	On the RDA Secondary Power Distribution Panel (UD7A3), set all circuit breakers to **OFF**.
Redundant	On the RDA Secondary Power Distribution Panel #3 (UD7A30), set all circuit breakers to **OFF**.

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

STOP

The following step will be performed by one of the following: site facilities technician for NWS sites, civil engineering for DoD, or a licensed electrician.

WARNING

At the Main Power Distribution Panel, there is power present below the Main Power Circuit Breaker. Use caution while working around this area.

12. Using the effectivity in ATTACHMENT 2, determine your site's configuration and perform the applicable steps:

Configuration 1 sites (Applies to NWS and DoD sites)	Relocate circuit breaker 25 (TELCO) in 7A2 to slot 14 in 7A3 for single channel sites, using 3/4-inch conduit as shown in figure 1. Ensure the hot, netural, and ground wires are run through the newly installed conduit.
Configuration 2 sites (Applies to NWS and DoD sites)	**Single channel sites:** Relocate circuit breaker 10 (Receptacles) in 7A2 to slot 10 in 7A3, using 3/4-inch conduit as shown in figure 1. Ensure the hot, netural, and ground wires are run through the newly installed conduit. **Redundant sites:** Relocate circuit breaker 10 (Receptacles) in 7A2 to slot 14 in CEC-DP (7TPS2), using 3/4-in conduit, or an existing approved raceway. Ensure the hot, netural, and ground wires are run through the same raceway.
Configuration 3 sites (Applies to DoD sites only)	• Install a 20 Amp circuit breaker in slot 9 of 7A3. • Install a duplex AC outlet in the location shown in figure 2. • Run the hot, netrual, and ground wires to the junction box using the 1-inch conduit at the bottom of 7A2, as shown in figure 2. • Install armored cable or solid 1/2-inch conduit between the junction box and the newly installed duplex outlet. • Relocate MCI TELCO breaker to slot 20 in 7A3.
All sites with TPS installed	Verify circuit breaker 20 (Fire Suppression Panel) in 7A2 has been moved to slot 13 in 7A3 or slot 17 in CEC-DP (UD7TPS2) for redundant sites. If the breaker has not been moved, relocate it.
All sites	Verify and relocate applicable circuit breakers at your site in the the Secondary Power Distribution Panel (7A3) or the CEC-DP (UD7TPS2) per figures 3 and 4. Update power distribution panel circuit breaker directory cards, one in the main, secondary, or CEC-DP as needed.

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

13. Attach the Critical Power Labels (provided in the kit) for each outlet as shown in figure 5 for single channel sites and figure 6 for redundant sites.

14. On the RDA Main Power Distribution Panel (7A2), set all circuit breakers to **ON.**

15. If a TPS is installed, perform the following turn on procedures, if not skip to step 16:

    a. Perform the step that apply to your site:

        (1) Set the Input Fuse Disconnect Switch to the **ON** (Closed) position, or

        (2) In the Maintenance Bypass Module, set the UIB to the **ON** (Closed) position.

    b. Perform the step that apply to your site:

        (1) Set the Output Fused Disconnect Switch to the **ON** (Closed) position, or

        (2) In the Maintenance Bypass Module, set the UOB to the **ON** (Closed) position.

    c. In the Battery Cabinet, place the Battery Disconnect Breaker in the **ON** (Closed) position.

    d. On the TPS Control Panel, ensure the **Push to Reset** button is pressed in.

    e. On the TPS Control Panel, turn CB1 to the **ON** position.

    f. On the TPS Control Panel, turn the **BATTERY** switch to the **NORMAL** position.

    g. On the TPS Control Panel, turn the **MODE** switch to the **NORMAL** position.

    h. On the TPS Control Panel, turn the **START** keyswitch momentarily to the right and release. The TPS will start and transfer to online mode in approximately 30 seconds.

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

16. Perform the following step(s) that apply to your site:

Configuration 1 sites	
Single channel	At the RDA Critical Equipment Contactor (CEC) Coil Control Panel (7TPS1), set the circuit breaker to **ON**.
	On the RDA Secondary Power Distribution Panel (7A3), set all circuit breakers to **ON** except circuit breaker 10 and 14.
	Using a multimeter, verify no power exists at the TELCO power outlet.
	Keeping the meter leads in the TELCO power outlet, have someone turn on circuit breaker 14 in the Secondary Power Panel (UD7A3) and verify power is applied once circuit breaker is turned on.
Configuration 2 sites	
Single channel	If not already accomplished, at the RDA Critical Equipment Contactor (CEC) Coil Control Panel (7TPS1), set the circuit breaker to **ON**.
	If not already accomplished, at the RDA Secondary Power Distribution Panel (7A3), set all circuit breakers to **ON** except circuit breaker 10.
	Using a multimeter, verify no power exists at the receptacle powered by CB10.
	Keeping the meter leads in the receptacle, have someone turn on circuit breaker 10 in the Secondary Power Panel UD7A3 and verify power is applied once circuit breaker is turned on.
Redundant	At the RDA CEC-DP (7TPS2), set all circuit breakers with the exception of CB14 to the **ON** position.
	Using a multimeter, verify no power exists at the receptacles powered by CB14.
	Keeping the meter leads in the receptacle, have someone turn on circuit breaker 14 in the RDA CEC-DP (7TPS2) and verify power is applied once circuit breaker is turned on.
Configuration 3 sites	
Single channel (Applies to DoD only)	On the RDA Secondary Power Distribution Panel (7A3), set circuit breaker 9 to the **OFF** position.
	Using a multimeter, verify no power exists in the newly installed receptacle powered by CB9.
	Keeping the meter leads in the receptacle, have someone turn on circuit breaker 9 in the Secondary Power Panel UD7A3 and verify power is applied once the circuit breaker is turned on.

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

17. Ensure only TELCO equipment is plugged into the TELCO outlet and that **ALL** TELCO equipment is plugged into the TELCO outlet.

18. At the Waveguide Pressurization Unit (UD6), set the front panel switch to the **ON** position. Redundant sites, ensure the Waveguide Pressurization Unit for both channels are set to the **ON** position.

19. At the Fire Suppression Control Panel (UD7A5), reconnect the (-) battery lead to the battery.

20. At the Fire Suppression Control Panel (UD7A5), press the reset button to clear the alarm.

21. **Co-located sites:** Perform the following RPG startup steps, all other sites proceed to step 22:

    a. If at the RPGPCA Cabinet UD70 workstation, perform the following steps. If Open RPG has not been installed, proceed to step 22:

    b. Perform the following RPG Group Power-up and Startup procedures as follows:

        (1) At the RPGPCA Cabinet Power Distribution Panel (UD70A22), set the circuit breaker (CB1) to the **ON** position.

        (2) At the RPGPCA Cabinet (UD70A11), press the 1/Test (ON) power switch button.

        (3) After the CDE login screen appears (approx. 45 seconds), login as a normal user.

        (4) At a normal terminal window user prompt, enter **hci&<CR>**. This will start the RPG HCI on the RPG maintenance position monitor.

        (5) At the RPG HCI, verify the RPG returned to a normal operational state.

        (6) Proceed to step 23.

22. Perform the following steps to startup UD21/22 RPG and communication cabinets:

    a. Ensure the A/B switch UD5A17 is in the A position for RPG.

    b. At the CDS> prompt, enter **KEY 1,***password***<Return>**.

    c. At the CDS> prompt, enter **PO ON<Return>** and wait until RPG load EOT Ø appears.

    d. Set the A/B switch UD5A17 in the B position for RDA.

23. Perform the following steps at the Transmitter (UD3):

    a. Unlock the CB1 High Voltage Power Circuit Breaker by inserting the HVCB key and rotating it counterclockwise to the **ON** position.

b. At the Transmitter Power Distribution Panel (UD3A13), place circuit breakers (CB3) cabinet lights, (CB1) high voltage power, and (CB2) auxiliary power to the **ON** position.

c. Redundant sites: Repeat step 23 in its entirety for the other channel.

24. Place the Pedestal Electronics Power switch (UD5A2S3) to the **ON** position.

25. Place the DAU Power switch (UD5A2S4) to the **ON** position.

26. At the RDA Maintenance Terminal perform the following steps:

a. At the System Console press the **<Return>** key until CDS> prompt appears. If CDS> prompt is not present, simultaneously press the **<Ctrl>** and **V** keys twice, and then the **<Return>** key twice to change to the CDS> prompt.

b. At the CDS> prompt, enter **KEY 1,***password***<Return>**.

c. Enter **PO ON<Return>** and wait approximately 2 to 3 minutes for the system to initialize. The RDA Main menu will appear after the system is initialized.

d. Press the **<Shift>** and **<Port>** keys simultaneously to place the cursor on the applications screen.

e. Enter **ARCH<Return>** to turn on archive unit and wait until the Archive II status indicates LOADED.

f. At the Main menu, enter **OPER<Return>** and verify the status line changes to OPER.

g. At the command line, enter **ENRC<Return>** to enable remote control.

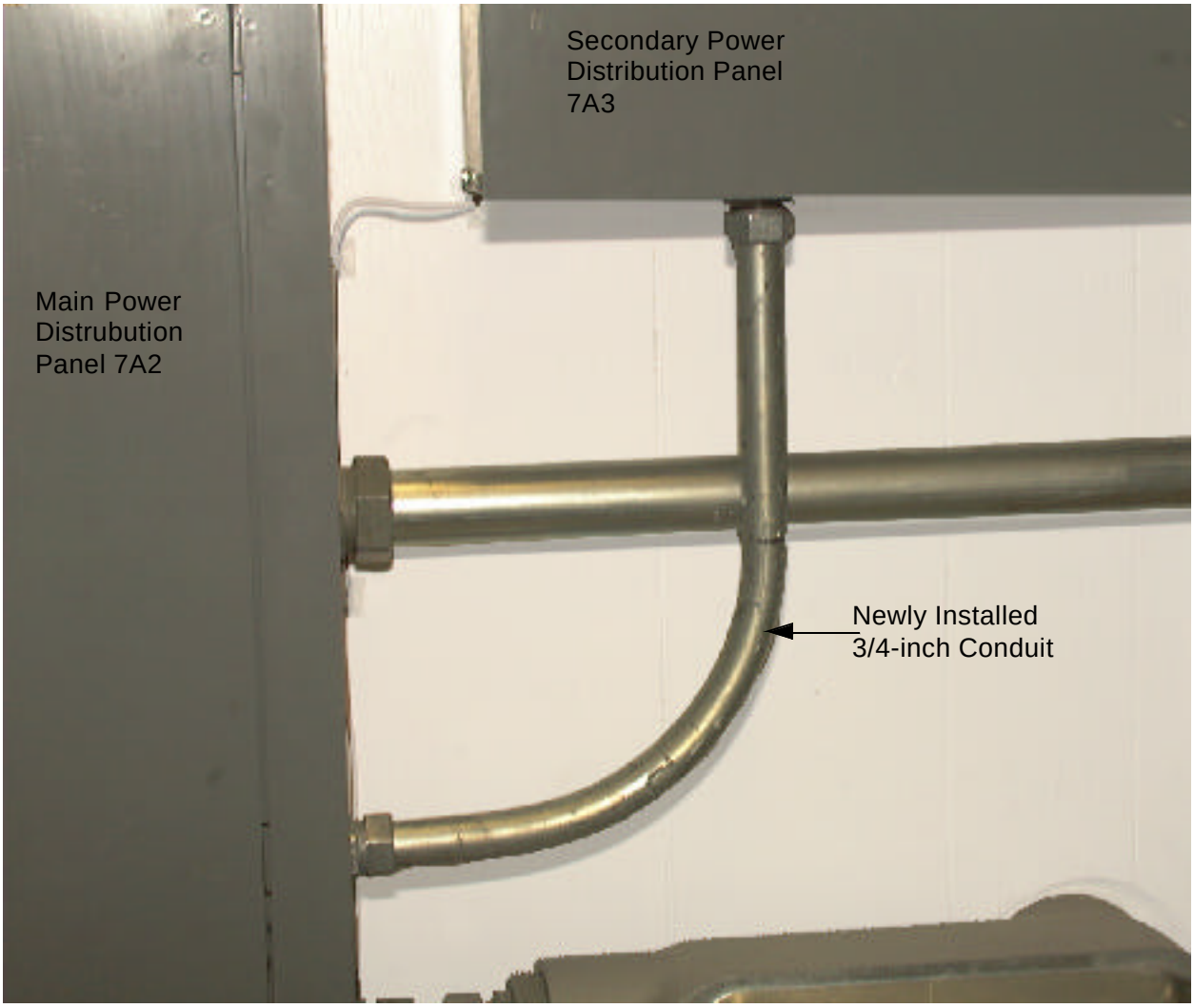


Figure 1. Main to Secondary Power Distribution Panel 90 Degree Conduit Location
(Single Channel Sites Only)

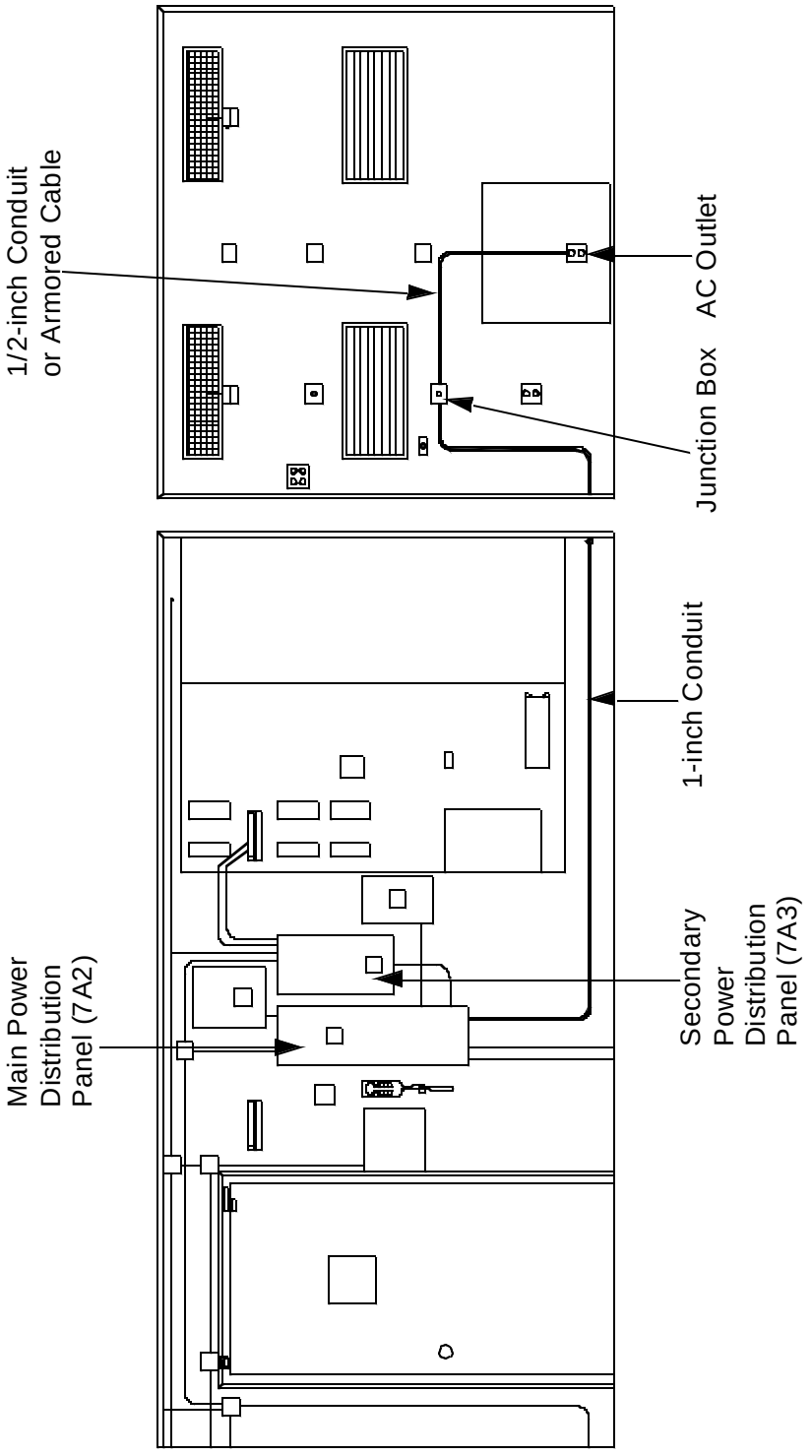
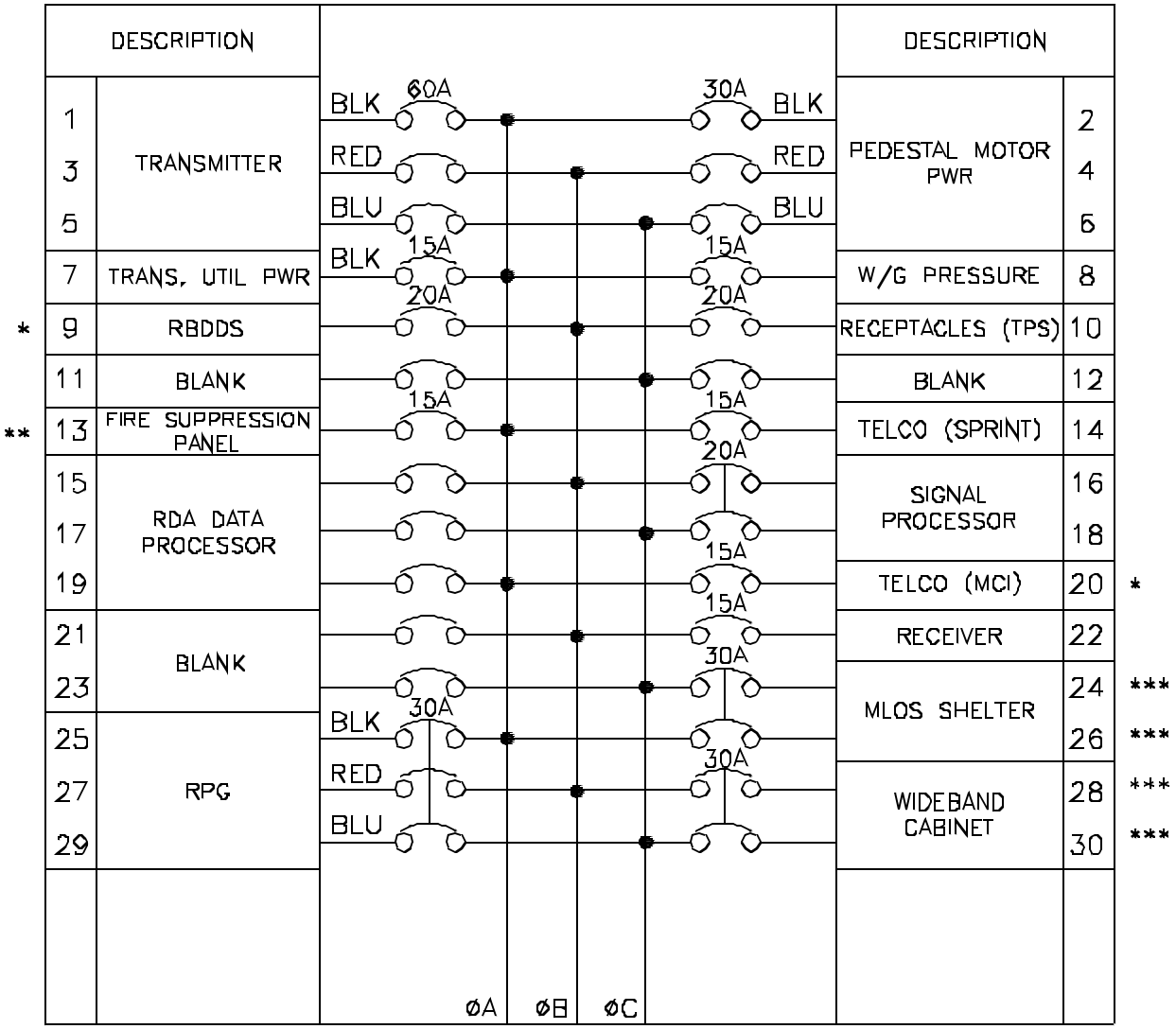


Figure 2. Configuration 3, Outlet Location and Proposed Conduit Location

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES



* DOD ONLY

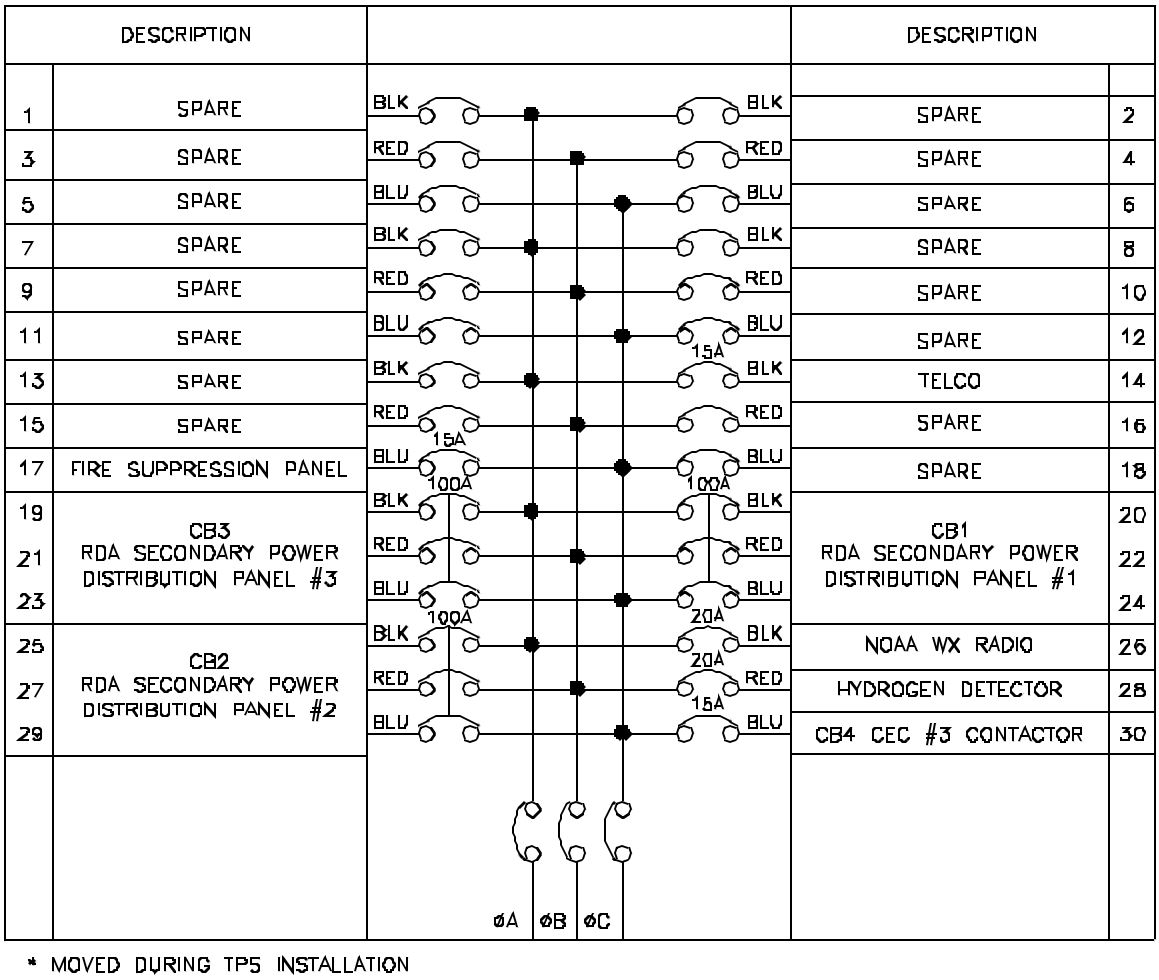
** MOVED DURING TPS INSTALLATION

*** SITE UNIQUE

Figure 3. Secondary Power Distribution Panel Configuration

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES



* MOVED DURING TP5 INSTALLATION

Figure 4. CEC-DP Power Distribution Panel Configuration

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

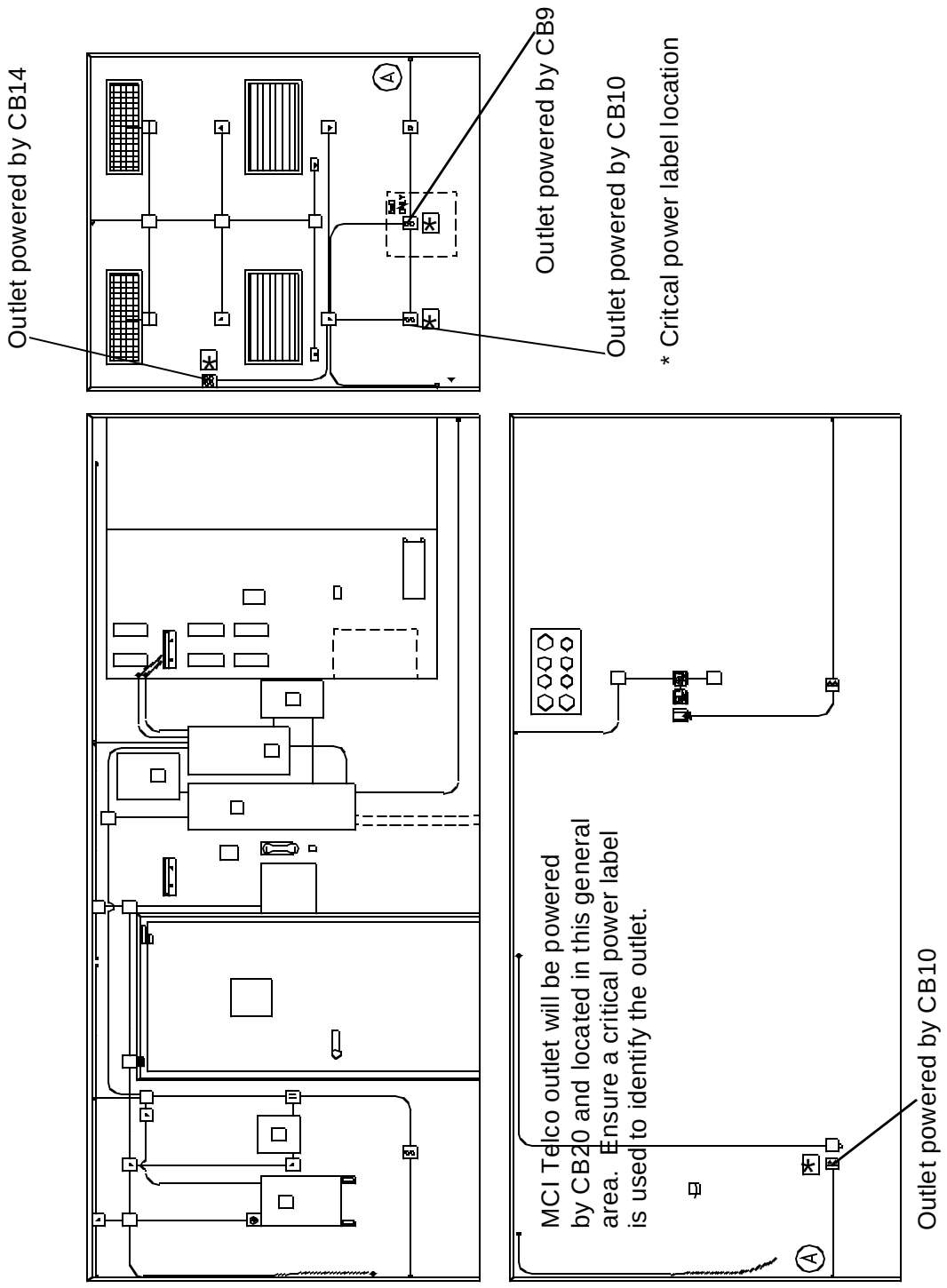


Figure 5. Single Channel Outlet and Label Locations

ATTACHMENT 1 (Continued)

CIRCUIT BREAKER RELOCATION PROCEDURES

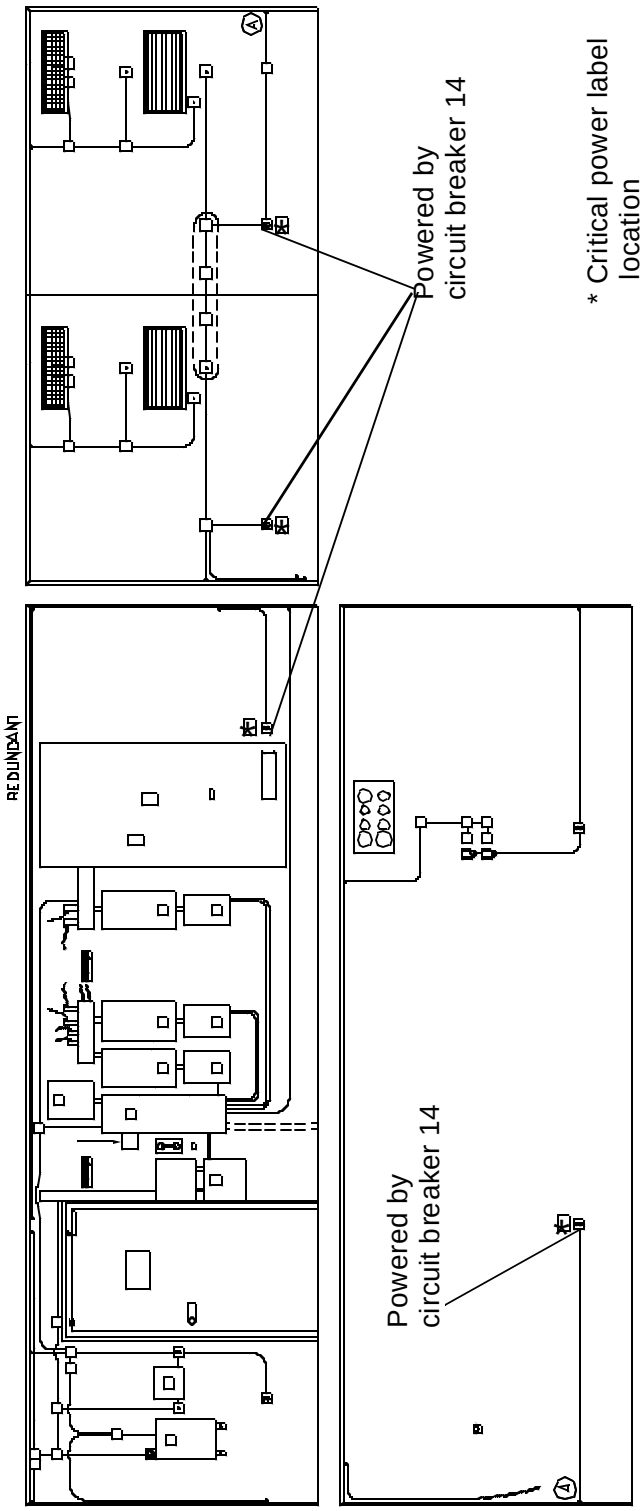


Figure 6. Redundant Site Outlet and Label Locations

ATTACHMENT 2

EFFECTIVITY

NWS

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
		Eastern Region					
ALBANY	EAST BERNE, NY	RDA	ENX	WN9518		X	
BINGHAMTON	BINGHAMTON, NY	RDA	BGM	WN9515		X	
BOSTON	TAUNTON, MA	RDA	BOX	WN9509	X		
BROOKHAVEN	UPTON, NY	RDA	OKX	WN9912	X		
BUFFALO	BUFFALO, NY	RDA	BUF	WN9528	X		
BURLINGTON	COLCHESTER, VT	RDA	CXX	WN9617	X		
CARIBOU	HOULTON, ME	RDA	CBW	WN9712	X		
CHARLESTON, SC	GRAYS, SC	RDA	CLX	WN9208	X		
CHARLESTON, WV	CHARLESTON, WV	RDA	RLX	WN9414	X		
CINCINNATI	WILMINGTON, OH	RDA	ILN	WN9710	X		
CLEVELAND	CLEVELAND, OH	RDA	CLE	WN9524	X		
COLUMBIA	WEST COLUMBIA, SC	RDA	CAE	WN9310	X		
GREER	GREER, SC	RDA	GSP	WN9312	X		
MOREHEAD CITY	NEWPORT, NC	RDA	MHX	WN9307	X		
NORFOLK	WAKEFIELD, VA	RDA	AKQ	WN9952	X		

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
PHILADELPHIA	FORT DIX, NJ	RDA	DIX	WN9950		X	
PITTSBURGH	CORAOPOLIS, PA	RDA	PBZ	WN9917	X		
PORTLAND, ME	GRAY, ME	RDA	GYX	WN9938	X		
RALEIGH/DURHAM	CLAYTON, NC	RDA	RAX	WN9306		X	
ROANOKE	ROANOKE, VA	RDA	FCX	WN9954	X		
STATE COLLEGE	STATE COLLEGE, PA	RDA	CCX	WN9925		X	
STERLING	STERLING, VA	RDA	LWX	WN9931	X		
WILMINGTON	SHALLOTTE, NC	RDA	LTX	WN9301	X		
		Southern Region					
ALBUQUERQUE	ALBUQUERQUE, NM	RDA	ABX	WP9365	X		
AMARILLO	AMARILLO, TX	RDA	AMA	WP9363	X		
ATLANTA	PEACHTREE CITY, GA	RDA	FFC	WP9219	X		
AUSTIN/SAN ANTONIO	NEW BRAUNFELS, TX	RDA	EWX	WP9253	X		
BIRMINGHAM	ALABASTER, AL	RDA	BMX	WP9957	X		
BROWNSVILLE	BROWNSVILLE, TX	RDA	BRO	WP9250	X		
CORPUS CHRISTI	CORPUS CHRISTI, TX	RDA	CRP	WP9251	X		
DALLAS/FT WORTH	FORT WORTH, TX	RDA	FWS	WP9259	X		

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
EL PASO	SANTA TERESA, NM	RDA	EPZ	WP9270	X		
HOUSTON	DICKINSON, TX	RDA	HGX	WP9935	X		
JACKSON, MS	JACKSON, MS	RDA	JAN	WP9235	X		
JACKSONVILLE	JACKSONVILLE, FL	RDA	JAX	WP9206	X		
KEY WEST	BOCA CHICA KEY, FL	RDA	BYX	WP9201	X		
KNOXVILLE	MORRISTOWN, TN	RDA	MRX	WP9325	X		
LAKE CHARLES	LAKE CHARLES, LA	RDA	LCH	WP9240	X		
LITTLE ROCK	NORTH LITTLE ROCK, AR	RDA	LZK	WP9340	X		
LUBBOCK	LUBBOCK, TX	RDA	LBB	WP9933	X		
MELBOURNE	MELBOURNE, FL	RDA	MLB	WP9204	X		
MEMPHIS	MILLINGTON, TN	RDA	NQA	WP9334		X	
MIAMI	MIAMI, FL	RDA	AMX	WP9918	X		
MIDLAND/ODESSA	MIDLAND, TX	RDA	MAF	WP9265	X		
MOBILE	MOBILE, AL	RDA	MOB	WP9223	X		
NASHVILLE	OLD HICKORY, TN	RDA	OHX	WP9327	X		
NORMAN	MIDWEST CITY, OK	RDA	TLX	WP9921		X	
NORTHEAST ALABAMA	HYTOP, AL	RDA	HTX	WP9913	X		
SAN ANGELO	SAN ANGELO, TX	RDA	SJT	WP9263	X		

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
SHREVEPORT	SHREVEPORT, LA	RDA	SHV	WP9248	X		
SLIDELL	SLIDELL, LA	RDA	LIX	WP9919	X		
TALLAHASSEE	TALLAHASSEE, FL	RDA	TLH	WP9214	X		
TAMPA	RUSKIN, FL	RDA	TBW	WP9961	X		
TULSA	INOLA, OK	RDA	INX	WP9356		X	
WESTERN ARKANSAS	CHAFFEE RIDGE, AR	RDA	SRX	WP9356	X		
		Central Region					
ABERDEEN	ABERDEEN, SD	RDA	ABR	WR9659	X		
BISMARCK	BISMARCK, ND	RDA	BIS	WR9764	X		
CHEYENNE	CHEYENNE, WY	RDA	CYS	WR9564	X		
CHICAGO	ROMEOVILLE, IL	RDA	LOT	WR9969	X		
DENVER	FRONT RANGE AP, CO	RDA	FTG	WR9469		X	
DES MOINES	JOHNSTON, IA	RDA	DMX	WR9546	X		
DETROIT	WHITE LAKE, MI	RDA	DTX	WR9954	X		
DODGE CITY	DODGE CITY, KS	RDA	DDC	WR9451	X		
DULUTH	DULUTH, MN	RDA	DLH	WR9745	X		
FARGO/GRAND FORKS	GRAND FORKS, ND	RDA	MVX	WR9750	X		

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
GOODLAND	GOODLAND, KS	RDA	GLD	WR9465	X		
GRAND ISLAND	BLUE HILL, NE	RDA	UEX	WR9552		X	
GRAND JUNCTION	GRAND JUNCTION, CO	RDA	GJX	WR9476		X	
GRAND RAPIDS	GRAND RAPIDS, MI	RDA	GRR	WR9635	X		
GREEN BAY	GREEN BAY, WI	RDA	GRB	WR9645	X		
INDIANAPOLIS	INDIANAPOLIS, IN	RDA	IND	WR9438	X		
JACKSON, KY	JACKSON, KY	RDA	JKL	WR9956	X		
LA CROSSE	LA CROSSE, WI	RDA	ARX	WR9643	X		
LINCOLN	LINCOLN, IL	RDA	ILX	WR9436	X		
LOUISVILLE	FORT KNOX, KY	RDA	LVX	WR9423		X	
MARQUETTE	NEGAUNEE, MI	RDA	MQT	WR9743	X		
MILWAUKEE	DOUSMAN, WI	RDA	MKX	WR9965	X		
MINNEAPOLIS	CHANHASSEN, MN	RDA	MPX	WR9658	X		
NCL MICHIGAN	GAYLORD, MI	RDA	APX	WR9610	X		
NORTH PLATTE	NORTH PLATTE, NE	RDA	LNX	WR9562	X		
NORTHERN INDIANA	NORTH WEBSTER, IN	RDA	IWX	WR9534	X		
OMAHA	VALLEY, NE	RDA	OAX	WR9553	X		
PADUCAH	PADUCAH, KY	RDA	PAH	WR9957	X		

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
PLEASANT HILL	PLEASANT HILL, MO	RDA	EAX	WR9446	X		
PUEBLO	PUEBLO, CO	RDA	PUX	WR9464	X		
QUAD CITIES	DAVENPORT, IA	RDA	DVN	WR9544	X		
RAPID CITY	NEW UNDERWOOD, SD	RDA	UDX	WR9662	X		
RIVERTON/LANDER	RIVERTON, WY	RDA	RIW	WR9576	X		
SIOUX FALLS	SIOUX FALLS, SD	RDA	FSD	WR9651	X		
SPRINGFIELD	SPRINGFIELD, MO	RDA	SGF	WR9440	X		
ST LOUIS	WELDON SPRING, MO	RDA	LSX	WR9971	X		
TOPEKA	TOPEKA, KS	RDA	TWX	WR9456		X	
WICHITA	WICHITA, KS	RDA	ICT	WR9450	X		
		Western Region					
BILLINGS	BILLINGS, MT	RDA	BLX	WT9677	X		
BOISE	BOISE, ID	RDA	CBX	WT9681		X	
CEDAR CITY	CEDAR CITY, UT	RDA	ICX	CONCDC		X	
ELKO	ELKO, NV	RDA	LRX	WT9903		X	
EUREKA (BUNKER HILL)	EUREKA, CA	RDA	BHX	WT9594	X		
FLAGSTAFF	FLAGSTAFF, AZ	RDA	FSX	WT9375		X	

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
GLASGOW	GLASGOW, MT	RDA	GGW	WT9768	X		
GREAT FALLS	GREAT FALLS, MT	RDA	TFX	WT9950	X		
LAS VEGAS	LAS VEGAS, NV	RDA	ESX	WT9386	X		
LOS ANGELES	LOS ANGELES, CA	RDA	VTX	WT9295		X	
PENDLETON	PENDLETON, OR	RDA	PDT	WT9688	X		
PHOENIX	PHOENIX, AZ	RDA	IWA	WT9278		X	
POCATELLO	SPRINGFIELD, ID	RDA	SFX	WT9578	X		
PORTLAND, OR	PORTLAND, OR	RDA	RTX	WT9698	X		
RENO	NIXON, NV	RDA	RGX	WT9488		X	
SACRAMENTO	DAVIS, CA	RDA	DAX	WT9914		X	
SALT LAKE CITY	SALT LAKE CITY, UT	RDA	MTX	WT9932		X	
SAN DIEGO	SAN DIEGO, CA	RDA	NKX	WT9918	X		
SAN FRANCISCO	LOS GATOS, CA	RDA	MUX	WT9933		X	
SAN JOAQUIN VALY	HANFORD, CA	RDA	HNX	WT9389	X		
SANTA ANA MTS	SANTA ANA MOUNTAINS, CA	RDA	SOX	WT9918		X	
SEATTLE	EVERETT, WA	RDA	ATX	WT9922		X	
SPOKANE	SPOKANE, WA	RDA	OTX	WT9785	X		
TUCSON	TUCSON, AZ	RDA	EMX	WT9274	X		

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
YUMA	YUMA, AZ	RDA	YUX	WT9278		X	
		Miscellaneous					
NSSL (RDA/ONAN GEN/PDST)	NORMAN, OK	RDA	NORO2	MAG000			
ROC FAA REDUNDANT	NORMAN, OK	RDA	CRIO2	WG9410			
DoD							
ALTUS AFB	FREDERICK, OK	RDA	FDR	FE4419	X	X	X
ANDERSEN AFB	ANDERSEN AFB, GU	RDA	UAM	FE5240	X	X	X
BEALE AFB	OROVILLE, CA	RDA	BBX	FE4686	X	X	X
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RDA	PTK	FI5294	X	X	X
CANNON AFB	FIELD, NM	RDA	FDX	FE4855	X	X	X
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RDA	GWX	FE3022	X	X	X
DOVER AFB	ELLENDALE STATE FOREST, DE	RDA	DOX	FE4497	X	X	X
DYESS AFB	MORAN, TX	RDA	DYX	FE4661	X	X	X
EDWARDS AFB	BORON, CA	RDA	EYX	FE2805	X	X	X
EGLIN AFB	RED BAY, FL	RDA	EVX	FE2823	X	X	X

ATTACHMENT 2 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code	Config 1	Config 2	Config 3
FT CAMPBELL	TRENTON, KY	RDA	HPX	FY4812	X	X	X
FT DRUM	MONTAGUE, NY	RDA	TYX	FY4846	X	X	X
FT HOOD	GRANGER, TX	RDA	GRK	FY4824	X	X	X
FT POLK	FT POLK, LA	RDA	POE	FY4825	X	X	X
FT RUCKER	ECHO, AL	RDA	EOX	FY4805	X	X	X
HOLLOMAN AFB	RUIDOSO, NM	RDA	HDX	FE4801	X	X	X
KADENA AB	KADENA AB, JA	RDA	KAD	FH5270	X	X	X
KUNSAN AB	KUNSAN AB, KO	RDA	KUZ	FH5284	X	X	X
LAJES AB	SANTA BARBARA, AZR	RDA	PLA	FE4486	X	X	X
LAUGHLIN AFB	BRACKETVILLE, TX	RDA	DFX	FE3099	X	X	X
MAXWELL AFB	CARRVILLE, AL	RDA	MXX	FE3300	X	X	X
MINOT AFB	DEERING, ND	RDA	MBX	FE4528	X	X	X
MOODY AFB	SOUTH STOCKTON, GA	RDA	VAX	FE4830	X	X	X
ROBINS AFB	JEFFERSONVILLE, GA	RDA	JGX	FE2067	X	X	X
VANCE AFB	CHEROKEE, OK	RDA	VNX	FE3029	X	X	X
VANDENBERG AFB	ORCUTT, CA	RDA	VBX	FE4610	X	X	X

NWS: EHB-6, Modification Note 67
DoD: TO 31P1-4-108-600

ATTACHMENT 3

CIRCUIT BREAKER RELOCATION COMPLETION FORM

******** DoD Only will complete and return this form ********
NWS report completion through EMRS

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Problem(s) Encountered:

_____

_____

_____

_____

Upon completion of this form, return the information to the ROC using one of the four methods below:

1. Mailing Address: Program Branch, Retrofit Management Team
   WSR-88D Radar Operations Center
   3200 Marshall Ave., Suite 101
   Norman, OK 73072-8028

2. FAX Number: (405) 366-6553
   ATTN: Retrofit Management Team

3. E-mail Address: NEXRAD.Logistics@noaa.gov

4. Web Version: http://www.roc.noaa.gov/ssb/logistics/complete/

ENGINEERING MANAGEMENT REPORTING SYSTEM
MAINTENANCE RECORD

Document Number
G 51301

General Information	1. Open Date	Time	2. Initials	3. Response Priority (check one)	4. Close Date	Time
	06 / 01 / 02	0900	DKR	O Immediate O Low O Routine ☒ Not Applicable	06 / 01 / 02	1100

5. Description
RELOCATE CIRCUIT BREAKER IAW MOD NOTE 67

Equipment Information	6. Station ID	7. Equipment Code	8. Serial Number	9. TM	10. AT	11. How Mal.
	RLX	RDA	AY39523001	M	M	999

12. *EQUIPMENT OPERATIONAL STATUS TIMES*	a. Fully Operational	b. Logistics Delay	Partly Operational	c. All Other	d. Logistics Delay	Not Operational	e. All Other
							2:00

13. *Parts Failure Information*

Block #	a. ASN	b. NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.
1							
2							
3							
4							
5							

14. *Work Load Information*

Type	Staff Hrs.
a. Routine	
b. Non-routine	
c. Travel	
d. Misc.	4:00
e. Overtime	

Miscellaneous Information	15. Maintenance Comments	16. Initials
	CIRCUIT BREAKER HAS BEEN RELOCATED	DKR

17. *SPECIAL PURPOSE REPORTING*	a. Mod. No.	b. Mod./Act./Deact.Date	c.	d.	e.
	67	06/01/02			

18. *CONFIGURATION MGMT. REPORTING* (use as directed)	ASN	Vendor Part Number (New Part)	Serial Number (Old Part)	Serial Number (New Part)

ATTACHMENT 4